1   **We claim:**

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3   1.   A version control system for managing versioned files comprising:

4   a) a central server storing a repository of said versioned files;

5   b) at least one proxy connected to said central server; each proxy including a read-

6   only cache for storing data from said repository;

7   c) at least one client connected to each of said proxies;

8   wherein modifications to said versioned files may only be made by said central server.

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10   2.   A version control system according to claim 1, wherein said central server includes a list

11   of proxies for each branch in the version control system and an update informer to notify each

12   proxy in the list when a change is made to each branch.

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14   3.   A version control system according to claim 1, wherein said central server includes an

15   access control system to validate requests received by said central server.

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17   4.   A version control system according to claim 1, wherein said client obtains versions of

18   files by requesting them from the corresponding proxy, and the proxy provides the version from

19   its read-only cache when available and by requesting the version from the central server

20   otherwise.

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22   5.   A version control system according to claim 1, wherein said proxy includes a mechanism

23   for providing versions of files to connected clients using said read-only cache when the desired

24   version is available and requesting the version from the central server otherwise.

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26   6.   A version control system according to claim 1, wherein the clients modify the repository

27   through said central server.

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29   7.   A version control system according to claim 6, wherein the central server includes a

30   checkout mechanism for controlling modification to the repository.

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2　8.　A version control system according to claim 7, wherein the central server includes a log

3　of changes made to the repository.

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5　9.　A version control system, according to claim 8, wherein the log is used to update a proxy

6　after a disruption to the connection between the proxy and the central server.

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8　10.　A version control system according to claim 1, wherein a regional proxy is connected to

9　said central server and to a plurality of proxy server in a geographic area, each of the plurality of

10　proxy servers being connected to at least one client wherein updates from the central server to

11　the plurality of proxy servers are first sent to the regional proxy.

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13　11.　A method of modifying a repository of versions of files in a version control system

14　including a central server and a client, said method comprising the steps of:

15　　　　a) the client requesting from the central server a lock on a version of a file in the version

16　　　　control system;

17　　　　b) the central server checking whether the requested version is unlocked, and if so

18　　　　granting the request; and

19　　　　c) the central server sending an update to other portions of the system.

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21　12.　A method according to claim 11, wherein said lock prevents other clients from modifying

22　said version of said file.

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24　13.　A method according to claim 11, further comprising the step of said client modifying said

25　version and returning the modification to said central server.

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27　14.　A method according to claim 13, further comprising the step of said central server

28　sending said modification to other portions of the system.

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1   15.   A central server in a version control system including proxy servers connected to clients

2   comprising:

3   a) a repository of versioned files;

4   b) a version manager for providing versions of files from said repository;

5   c) an access control system for managing requests from clients to modify the repository;

6   d) a log of changes made to the repository;

7   e) a list of connected proxies and portions of said repository, the proxies containing read-

8   only caches of said portions of said repository for providing versions of files to said clients.

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10   16.   A central server according to claim 15, wherein said log is used to update one of said

11   read-only caches in a respective proxy after a disruption to the connection between said

12   respective proxy and said central server

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14   17.   A proxy server in a version control system including a central server containing a

15   repository of versioned files and a client, said proxy server comprising:

16   a) a read-only cache for storing data from said repository; and

17   b) a version provider to provide a version of a file to said client, the version provider

18   being   configured to first check the read-only cache for the requested version and if it is

19   not found, to request the version from said central server.

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21   18.   A proxy server according to claim 17, wherein the read-only cache is configured to store

22   copies of version requested from said central server.

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24   19.   A computer readable medium containing processor instructions for implementing a

25   version control system including:

26   a) a central server storing a repository of versioned files;

27   b) at least one proxy connected to said central server; each proxy including a read-

28   only cache for storing data from said repository;

29   c) at least one client connected to each of said proxies;

30   wherein modifications to said versioned files may only be made by said central server.

-14-

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2   20.   A computer readable medium according to claim 19, further comprising instructions to

3   maintain a list of proxies for each branch in the version control system and notify each proxy in

4   the list when a change is made to each branch.

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6   21.   A computer readable medium according to claim 19, wherein said central server includes

7   an access control system to validate requests received by said central server.

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9   22.   A computer readable medium according to claim 19, wherein said client obtains versions

10 of files by requesting them from the corresponding proxy, and the proxy provides the version

11 from its read-only cache when available and by requesting the version from the central server

12 otherwise.

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14 23.   A computer readable medium according to claim 19, wherein said proxy includes a

15 mechanism for providing versions of files to connected clients using said read-only cache when

16 the desired version is available and requesting the version from the central server otherwise.

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18 24.   A computer readable medium according to claim 19, wherein the clients modify the

19 repository through said central server.

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21 25.   A computer readable medium according to claim 24, wherein the central server includes a

22 checkout mechanism for controlling modification to the repository.

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24 26.   A computer readable medium according to claim 25 wherein the central server includes a

25 log of changes made to the repository.

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27 27.   A computer readable medium, according to claim 26, wherein the log is used to update a

28 proxy after a disruption to the connection between the proxy and the central server.

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2   28.   A computer readable medium according to claim 19, wherein a regional proxy is

3   connected to said central server and to a plurality of proxy server in a geographic area, each of

4   the plurality of proxy servers being connected to at least one client wherein updates from the

5   central server to the plurality of proxy servers are first sent to the regional proxy.